

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* REUBEN CLARK and  
GARY WEISE

Appeal 2007-0561  
Application 10/689,465<sup>1</sup>  
Technology Center 2800

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Decided: May 25, 2007

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**MAILED**

**MAY 25 2007**

**PAT. & T.M. OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Before JAMESON LEE, ADRIENE LEPIANE HANLON, and SALLY C.  
MEDLEY, *Administrative Patent Judges*.

LEE, *Administrative Patent Judge*.

DECISION ON APPEAL

1 A. Statement of the Case

2  
3 This is a decision on appeal by an applicant under 35 U.S.C. § 134(a) from a  
4 rejection of claims 9, and 11-27 of Application 10/689,465. We have jurisdiction  
5 under 35 U.S.C. § 6(b).  
6

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<sup>1</sup> The real party in interest is Consolidated Manufacturing International, LLC.

Reference Relied on by the Examiner

Bondeson	US Patent 2,116,776	May 10, 1938
Mooney	US Patent 3,988,052	Oct. 26, 1976
Shemtov	US patent 4,159,859	Jul. 3, 1979
Reichman	US Patent 4,189,198	Feb. 19, 1980
Churla	US Patent 4,210,374	Jul. 1, 1980
Meinhardt	US Patent 4,806,108	Feb. 21, 1989
Perera	US Patent 5,816,844	Oct. 6, 1998

The Rejections on Appeal

The Examiner rejected claims 9, 11-13, 17, 18-22, 24, 26, and 27 under 35 U.S.C. § 103 as unpatentable over Mooney in view of Reichman, Churla, and Meinhardt.

The Examiner rejected claims 14 and 23 under 35 U.S.C. § 103 as unpatentable over Mooney in view of Reichman, Meinhardt, Churla, and Bondeson.

The Examiner rejected claims 16 and 26 under 35 U.S.C. § 103 as unpatentable over Mooney in view of Reichman, Meinhardt, Churla, and Semtov.

The Examiner rejected claims 15 and 25 under 35 U.S.C. § 103 as unpatentable over Mooney in view of Reichman, Meinhardt, Churla and Perera.

B. Issues

Have the applicants shown error in the rejections of claims 9, and 11-27?

C. Summary of the Decision

The applicants have not shown error in the rejections of claims 9, and 11-27.

D Findings of Fact (Referenced as FF. ¶ No.)

1. The invention relates to an electrical grounding apparatus which connects electrical devices to ground. (Specification, 1, ll. 10-12).

2. It has been known to ground an electrical device by connecting the device electrically to a grounding member such as rebar, pipe, and ground rods. (Specification, 1, ll. 13-15).

3. It has been known to use a grounding clamp to electrically connect a ground wire from an electrical device to a grounding member. (Specification, 1, ll. 13-14).

4. Many different grounding clamps have been disclosed in the prior art. (Specification, 1, ll. 23-24).

5. According to the applicants' specification, the prior art grounding clamps are inadequate because the grounding wire from the electrical device is attached through a hole on the body of the clamp and thus an installer must pull the ground wire through the hole in the clamp, which task is both cumbersome and time consuming. (Specification, 1, ll. 24-29).

6. The Examiner has cited many prior art references each disclosing a grounding clamp which does not receive the grounding wire through a hole on the clamp. Those references include Mooney, Reichman, Shemtov, Meinhardt, Churla, and Bondeson.

7. Independent claims 9 and 18 are reproduced below:

9. A clamping apparatus for electrically connecting at least a first ground wire to a grounding member, the clamping apparatus comprising:

a bottom clamping member comprising a bottom medial portion and first and second threaded holes on first and second sides of the bottom medial portion for accepting first and second screws,

1        respectively, the first and second threaded holes disposed along first  
2        and second longitudinal axes, respectively;

3  
4        a top clamping member discrete with respect to and for  
5        cooperation with the bottom clamping member and comprising a top  
6        medial portion for cooperation with the bottom medial portion to  
7        define a grounding member axis, the top clamping member  
8        comprising first and second holes on first and second sides,  
9        respectively, of the top clamping member for alignment with the first  
10       and second threaded holes of the bottom clamping member; and

11  
12       trough comprising a base wall and opposing first and second  
13       side walls, the trough being integral with the top clamping member  
14       opposite the bottom clamping member, the first side wall defining a  
15       threaded hole for receiving a set screw in threaded engagement  
16       therewith, the threaded hole extending along a third longitudinal axis  
17       through the first side wall and toward the second side wall, the third  
18       longitudinal axis intersecting at least substantially perpendicularly  
19       with at least one of the first and second longitudinal axes, the trough  
20       defining an opening between the first and second side walls for  
21       receiving a first ground wire, the opening further defining a ground  
22       wire axis parallel to the grounding member axis, whereby the first  
23       ground wire can be secured in the trough against the second side wall  
24       by the set screw.

25  
26       18.    A clamping apparatus for electrically connecting at least  
27       a first ground wire to a grounding member, the clamping apparatus  
28       comprising:

29  
30       a bottom clamping member comprising a bottom medial  
31       portion and first and second threaded holes on first and second sides  
32       of the bottom medial portion receiving first and second screws,  
33       respectively, the first and second screws disposed along first and  
34       second longitudinal axes, respectively;

35  
36       a top clamping member discrete with respect to and for  
37       cooperation with the bottom clamping member and comprising a top  
38       medial portion for cooperation with the bottom medial portion to  
39       define a grounding member axis, the top clamping member

1 comprising first and second holes on first and second sides,  
2 respectively, of the top clamping member receiving the first and  
3 second screws;

4  
5 trough comprising a base wall and opposing first and second  
6 side walls, the trough being integral with the top clamping member  
7 opposite the bottom clamping member, the trough defining an  
8 opening between the first and second side walls, the opening further  
9 defining a ground wire axis parallel to the grounding member axis;  
10 and

11  
12 a threaded hole defined by the first side wall for threadedly  
13 engaging a set screw disposed along a third longitudinal axis, the third  
14 longitudinal axis intersecting at least one of the first and second  
15 longitudinal axes above the first or second screw.

16  
17 8. It is not in dispute that the claimed invention requires the claimed  
18 clamping apparatus to be composed of a top portion and a bottom portion each  
19 with a first and a second screw hole which align with corresponding screw holes  
20 on the other portion and that the screw holes are disposed along a first and second  
21 longitudinal axis.

22 9. Mooney discloses a grounding clamp comprising a top portion and a  
23 bottom portion each with a first and a second screw hole which align with  
24 corresponding screw holes on the other portion, and the screw holes are disposed  
25 along a first and second longitudinal axis. The applicants do not dispute this fact.

26 10. It is not in dispute that the claimed invention requires a trough integral  
27 with the top portion of the grounding clamp, that the trough has a base wall and  
28 opposing side walls wherein the first side wall has a threaded hole for receiving a  
29 set screw extending in a third longitudinal axis from the first side wall to the  
30 second side wall, that the third longitudinal axis intersects the first or the second

1 longitudinal axis substantially perpendicularly, and that the trough defines a  
2 ground wire axis parallel to the ground member axis.

3 11. Mooney discloses a trough integral with the top portion of its  
4 grounding clamp, and a set screw extending into the space within the trough  
5 through a top plate to secure the ground wire received within the trough. The  
6 applicants do not dispute this fact.

7 12. Mooney's integral trough structure, however, is oriented in such a  
8 manner that the set screw enters the trough from a hole in a top plate rather than  
9 from a hole on the side wall and that the axis of extension of the set screw, the  
10 third longitudinal axis, is parallel rather than perpendicular to at least one of the  
11 first and second longitudinal axis defined by the screw holes on the top and bottom  
12 portions of the clamp as is recited in the applicants' claims. (Mooney, Figs. 1 and  
13 2).

14 13. Nonetheless, Mooney's trough defines a ground wire axis parallel to  
15 the ground member axis, as is recited in the applicants' claims.

16 14. The Examiner determined that the only difference between the  
17 claimed invention of the applicants' independent claims 9 and 18 and the  
18 grounding clamp disclosed in Mooney is that as noted above in FF. 12. The  
19 applicants have not identified any other difference.

20 15. The Examiner has identified several prior art references each  
21 disclosing a grounding clamp having a trough which defines an opening for  
22 receiving a grounding wire and having a set screw extending either through a top  
23 plate or through a side wall of the trough to secure the grounding wire. Those  
24 references include Mooney, Reichman, Shemtov, and Meinhardt, Churla, and  
25 Bondeson.

1           16.    At least in Meinhardt and Bondeson the set screw enters the trough  
2   through a side wall, and in Bondeson the axis of extension of the set screw is  
3   perpendicular to the axis defined by aligned screw holes on the top and bottom  
4   portions of the grounding clamp.

5           17.    In Shemtov and Reichman, the trough can be selectably positioned at  
6   a desired angle relative to the rest of the grounding clamp (Shemtov Fig. 6; col. 3,  
7   ll. 42-50) (Reichman Fig. 1; col. 4, ll. 1-7). Therefore, what is perceived as a top  
8   plate entrance for the set screw in one orientation becomes a side wall entry in  
9   another orientation.

10          18.    In Churla, the trough opening in the grounding clamp defines a  
11   ground wire axis which is perpendicular to the axis of the grounding member.  
12   (Churla, Fig. 1).

13          19.    In Meinhardt, the trough opening in the grounding clamp defines a  
14   ground wire axis which is perpendicular to the axis of the grounding member.  
15   (Meinhardt, Fig. 6).

16          20.    In Bondeson, the trough opening in the grounding clamp defines a  
17   ground wire axis which is parallel to the axis of the grounding member.  
18   (Bondeson, Fig. 6).

19          21.    In Mooney, the trough opening in the grounding clamp defines a  
20   ground wire axis which is parallel to the axis of the grounding member. (Mooney,  
21   Figs. 1 and 2).

22          22.    In Shemtov, the trough opening in the grounding clamp defines a  
23   ground wire axis which is parallel to the axis of the grounding member. (Shemtov,  
24   Fig. 1).

25          23.    In Reichman, the trough opening in the grounding clamp defines a  
26   ground wire axis which may be positioned at any one of four different angles

1 relative to the axis of the grounding member including the zero angle. (Reichman,  
2 4:3-5; Fig. 1).

3 24. In Reichman, the trough can be rotated into a number of different  
4 positions relative to a coupling collar 11. (Reichman, 4:3-5; Fig. 1).

5 25. Reichman describes the position of the clamp or trough as reflecting a  
6 “preselected or desired angular relationship” between the clamp and the coupling  
7 collar. (Reichman, 4:2-4).

8 26. In Reichman, the variable angular relationship between the clamp and  
9 the coupling collar includes a perpendicular relationship between the ground wire  
10 axis and the axis of the grounding member as well as a parallel relationship  
11 between the ground wire axis and the axis of the grounding member. (Reichman,  
12 4:2-5; Fig. 1).

13 E. Principles of law

14 Obviousness is a legal determination made on the basis of underlying factual  
15 inquiries including (1) the scope and content of the prior art; (2) the differences  
16 between the claimed invention and the prior art; (3) the level of ordinary skill in  
17 the art; and (4) any objective evidence of unobviousness, *Graham v. John Deere*  
18 *Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). The level of ordinary skill in the  
19 art is evidenced by the applied references. *See In re Oelrich*, 579 F.2d 86, 91,  
20 198 USPQ 210, 214 (CCPA 1978); *In re GPAC Inc.*, 57 F.3d 1573, 1579,  
21 35 USPQ2d 1116, 1121 (Fed. Cir. 1995).

22 While motivation is necessary to combine teachings, the motivation need not  
23 be expressly stated in any prior art reference. *In re Kahn*, 441 F.3d 977, 989, 78  
24 USPQ2d 1329, 1338 (Fed. Cir. 2006). There need only be an articulated reasoning  
25 with rational underpinnings to support a motivation to combine teachings. *In re*  
26 *Kahn*, 441 F.3d at 988, 78 USPQ2d at 1337. One with ordinary skill in the art is



1 presumed to have skills apart from what the prior art references explicitly say. *See*  
2 *In re Sovish*, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985). A person of  
3 ordinary skill is also a person of ordinary creativity, not an automaton. *KSR*  
4 *International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742, 82 USPQ2d 1385, 1397  
5 (2007). Rigid rules that deny factfinders recourse to common sense are neither  
6 necessary nor consistent with case law. *Id.* In considering suggestion from the  
7 prior art for determining obviousness, the proper approach is quite flexible and  
8 requires consideration of common knowledge and common sense. *DyStar*  
9 *Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co.*, 464 F.3d 1356,  
10 1367, 80 USPQ2d 1641, 1651 (Fed. Cir. 2006).

11 An invention may be obvious for reasons the inventor did not contemplate,  
12 because applicable prior art need not address the same problem as that faced by an  
13 applicant for patent. *In re Dillon*, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901-02  
14 (Fed. Cir. 1990) (en banc), *cert. denied*, 111 S. Ct. 1682. A prior art reference is  
15 from an analogous art and proper for consideration if it is reasonably pertinent to  
16 the particular problem with which the inventor is involved. *In re Deminski*, 796  
17 F.2d 436, 442, 230 USPQ 313, 315 (Fed. Cir. 1986).

18 F. Analysis

19 While the applicants' brief cites extensively to the Manual of Patent  
20 Examining Procedure for substantive law on obviousness, the manual does not  
21 have the force and effect of law. The applicable law comes from statutes,  
22 precedents of our reviewing court, and decisions of the U.S. Supreme Court.

23 The applicants argue that for reaching a conclusion for obviousness the  
24 Court of Appeals for the Federal Circuit has consistently required a specific  
25 teaching, motivation, or suggestion to combine the teachings of individual items of  
26 prior art. That is a true statement. But even more enlightening is the Supreme

1 Court's decision in *KSR International Co.*, supra, which explained that the Federal  
2 Circuit has been applying the "teaching, suggestion, and motivation" inquiry,  
3 otherwise known as the "TSM test," too rigidly and not in a manner consistent  
4 with the expansive and flexible approach for determining obviousness as was set  
5 forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). The  
6 applicants' arguments reflect the same rigid and inflexible approach to considering  
7 teaching, suggestion, and motivation, that the Supreme Court explained in *KSR*  
8 *International Co.* as improper. The following discussion by the Supreme Court, in  
9 *KSR International Co.*, 127 S. Ct. at 1741-43, 82 USPQ2d at 1397 is instructive:

10           The flaws in the analysis of the Court of Appeals relate for the  
11 most part to the court's narrow conception of the obviousness inquiry  
12 reflected in its application of the TSM test. In determining whether  
13 the subject matter of a patent claim is obvious, neither the particular  
14 motivation nor the avowed purpose of the patentee [here the  
15 applicants] controls. What matters is the objective reach of the claim.  
16 If the claim extends to what is obvious, it is invalid under § 103. . . .  
17

18           The first error of the Court of Appeals in this case was to  
19 foreclose this reasoning by holding that courts and patent examiners  
20 should look only to the problem the patentee [here the applicants] was  
21 trying to solve. . . .  
22

23           The second error of the Court of Appeals lay in its assumption  
24 that a person of ordinary skill attempting to solve a problem will be  
25 led only to those elements of prior art designed to solve the same  
26 problem. . . . Common sense teaches, however, that familiar items  
27 may have obvious uses beyond their primary purposes, and in many  
28 cases a person of ordinary skill will be able to fit the teachings of  
29 multiple patents together like pieces of a puzzle. . . .  
30

31           The same constricted analysis led the Court of Appeals to  
32 conclude, in error, that a patent claim cannot be proved obvious  
33 merely by showing that the combination of elements was "obvious to  
34 try." *Id.*, at 289 (internal quotation marks omitted). When there is a

1 design need or market pressure to solve a problem and there are a  
2 finite number of identified, predictable solutions, a person of ordinary  
3 skill has good reason to pursue the known options within his or her  
4 technical grasp. If this leads to the anticipated success, it is likely the  
5 product not of innovation but of ordinary skill and common sense. . . .

6  
7 The Court of Appeals, finally, drew the wrong conclusion from  
8 the risk of courts and patent examiners falling prey to hindsight bias. .  
9 . . A factfinder should be aware, of course, of the distortion caused by  
10 hindsight bias and must be cautious of arguments reliant upon *ex post*  
11 reasoning. See *Graham*, 383 U.S., at 36 (warning against a  
12 “temptation to read into the prior art the teachings of the invention in  
13 issue” and instructing courts to “guard against slipping into the use of  
14 hindsight” (quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg.*  
15 *& Supply Co.*, 332 F.2d 406, 412 (CA6 1964))). Rigid preventive  
16 rules that deny factfinders recourse to common sense, however, are  
17 neither necessary under our case law nor consistent with it.

18  
19 The applicants’ arguments suffer from each one of the above-noted errors  
20 discussed by the Supreme Court. Foremost is the complete disregard of basic skill  
21 and common sense in piecing together teachings from multiple references. The  
22 applicants note the differences between the claimed invention and each prior art  
23 reference by itself and assert that that is properly considering the reference as a  
24 whole. But that erroneously ignores the usefulness of component parts for  
25 application in related structures, which would have been recognized by one with  
26 ordinary skill in the art. The applicants argue that because “one of the bases of the  
27 Reichman ‘198 patent is the concept of a selectively oriented wire clamping  
28 member,” Reichman is not pertinent. That patently ignores the teaching that the  
29 ground wire axis in a grounding clamp can be set to whatever orientation, as  
30 desired. An applicable prior art reference need not address the same problem as  
31 that addressed by the applicant for patent. *In re Dillon*, 919 F.2d at 693, 16  
32 USPQ2d at 1901-02. Also, a prior art reference is from an analogous art and

1 proper for consideration if it is reasonably pertinent to the particular problem with  
2 which the applicant for patent is involved. *In re Deminski*, 796 F.2d at 442, 230  
3 USPQ at 315.

4 While the ground plug of Meinhardt is not integral to the bushing, that does  
5 not detract from or undermine Meinhardt's teaching that the set screw penetrates  
6 the trough from a side wall and does not render Meinhardt impertinent. While the  
7 grounding wire in Churla is received in a perpendicular orientation relative to the  
8 axis of the grounding member, that does not detract from or undermine its teaching  
9 about the orientation of the set screw or about a trough which is integral with the  
10 grounding clamp. Neither does the fact that Churla is not concerned with the  
11 problem of orienting the grounding clamp with respect to the screws joining the  
12 separate portions of the clamp together detract from or undermine its teaching  
13 about the orientation and positioning of the set screw. The notion that the presence  
14 of any different feature or objective in a prior art reference renders the prior art  
15 reference inapplicable as a teaching source as to another disclosed feature is  
16 wrong, defies logic and common sense, and has no basis in law.

17 The applicants argue that because the clamping member of Meinhardt and  
18 Reichman is nonintegral, movable, and also detachable from a monolithic bushing  
19 and because the clamping member of Mooney is integral and fixed in orientation,  
20 one with ordinary skill in the art could not combine the teachings of the three  
21 references. The argument is without merit. The teachings have not been used in  
22 an inconsistent manner as in requiring the clamping member to be both fixed and  
23 detachable from a bushing, or both fixed and rotatable relative to a bushing, or  
24 both integral and nonintegral at the same time. All the teachings of each prior art  
25 reference are available to one with ordinary skill in the art, as far as they can be put  
26 together by reliance on logic and common sense. *See, e.g., DyStar Textilfarben*

1 *GmbH & Co.*, 464 F.3d at 1367, 80 USPQ2d at 1651; *In re Sovish*, 769 F.2d at  
2 743, 226 USPQ at 774 (Fed. Cir. 1985)(“The [applicants’] argument presumes  
3 stupidity rather than skill.”).

4 It is true that merely finding that each claim feature is present in some prior  
5 art reference is not sufficient to establish a prima facie case of obviousness. But  
6 that is not what the Examiner has done. There has to be an articulated rational for  
7 putting together the combination. For the rejection of independent claims 9 and  
8 18, the Examiner located and discussed four prior art references -- Mooney,  
9 Meinhardt, Reichman, and Churla, each specifically directed to an electrical  
10 grounding clamp apparatus that receives a ground wire. The level of ordinary skill  
11 in the art is reflected in these references. These references are both within the field  
12 of the inventor’s endeavor as well as reasonably pertinent to the problem the  
13 applicants intend to solve, i.e., cumbersome and laborious task of threading a  
14 grounding wire through a hole in the wall of a grounding clamp. The Examiner’s  
15 stated rationale is that these prior art references illustrate a variety of orientations  
16 for the trough structure and set screw in the grounding clamp relative to the  
17 grounding member and one with ordinary skill in the art would have had all of  
18 these alternative orientations at his or her disposal for selection in a routine task.  
19 In other words, one with ordinary skill in the art would know to pick from pre-  
20 existing orientations of the trough and set screw, in the absence of anything  
21 unpredictable which in this case there is not. We agree. The applicants have not  
22 demonstrated why the determination of the Examiner, ostensibly a reasonable one  
23 based on the collection of prior art, and plain logic and common sense, is wrong.

24 A grounding clamp does not belong to an unpredictable art. The Examiner  
25 is correct that logic and common sense dictates that the selection of various  
26 features in the cited prior art references, used for their disclosed purposes and for

1 predictable results, is but an application of ordinary skill. As was stated by the  
2 Supreme Court in *KSR International Co.*, slip. op. at 17: “A person of ordinary  
3 skill is also a person of ordinary creativity, not an automaton.” The applicants  
4 erroneously assert that the level of ordinary skill in the art cannot be relied upon to  
5 provide a suggestion to combine reference teachings. It can, as it should, since  
6 obviousness is determined from the perspective of one with ordinary skill in the  
7 art. The Court of Appeals for the Federal Circuit has also stated that the test for  
8 suggestion from the prior art is a flexible one and requires the consideration of  
9 common knowledge and common sense. *DyStar Textilfarben GmbH & Co.*, 464  
10 F.3d at 1367, 80 USPQ2d at 1651.

11 The Examiner is correct that the applicants have improperly attacked the  
12 prior art references individually rather than as a combination. *See In re Keller*, 642  
13 F.2d 413, 426, 208 USPQ 871, 872 (CCPA 1981). The applicants’ insistence on  
14 finding every claim feature in each prior art reference as a precondition to applying  
15 a teaching from that reference is insensible and renders useless a rejection based on  
16 the combined teachings of multiple references. According to the applicants’  
17 contention, any single reference in the combination would have already had to  
18 disclose every claimed feature before any of its teachings can apply.

19 All of the applicants’ arguments have been addressed. They do not  
20 demonstrate any error in the rejections on appeal. According to the applicants’  
21 approach, no teaching from any one reference may be selected or applied by one  
22 with ordinary skill in the art unless every other feature disclosed by the reference is  
23 the same as that claimed by the applicants. That is incorrect and ignores the skill,  
24 intelligence, and common sense possessed by one with ordinary skill.

25 As can be seen from Mooney’s Figure 1, if the trough structure were  
26 oriented differently as is shown in Meinhardt, such that the set screw can be

1 regarded as entering the trough through a side wall rather than a top plate, there  
2 would be no other identified difference between the claimed invention of claims 9  
3 and 18 and the disclosed grounding clamp of Mooney. One with ordinary skill in  
4 the art would have possessed sufficient skill to use in Mooney's grounding clamp  
5 the trough and set screw orientation as disclosed in Meinhardt and expect success.  
6 The trough and set screw orientation disclosed by Meinhardt would have been  
7 available for use and selection by one with ordinary skill in the art, as would be  
8 those disclosed by Reichman and Churla.

9 The applicants have not argued the merits of any dependent claim separate  
10 from that of the independent claim on which it depends. Accordingly, all of the  
11 claims stand or fall together.

12 For the foregoing reasons, the applicants have not met their burden of proof  
13 in demonstrating error in any rejection on appeal.

#### 14 CONCLUSION

15 The rejection of claims 9, 11-13, 17, 18-22, 24, 26, and 27 under 35 U.S.C.  
16 § 103 as unpatentable over Mooney, Reichman, Churla, and Meinhardt is  
17 **affirmed**.

18 The rejection of claims 14 and 23 under 35 U.S.C. § 103 as unpatentable  
19 over Mooney, Reichman, Meinhardt, Churla, and Bondeson is **affirmed**.

20 The rejection of claims 16 and 26 under 35 U.S.C. § 103 as unpatentable  
21 over Mooney, Reichman, Meinhardt, Churla, and Semtov is **affirmed**.

22 The rejection of claims 15 and 25 under 35 U.S.C. § 103 as unpatentable  
23 over Mooney, Reichman, Meinhardt, Churla, and Perera is **affirmed**.

Appeal 2007-0561  
Application 10/689,465

- 1           No Time period for taking any subsequent action in connection with this
- 2   appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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Appeal 2007-0561  
Application 10/689,465

By First Class Mail

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